

LIQUID VOLUME MONITOR FOR PRESSURIZED TANKS

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ABSTRACT OF THE DISCLOSURE

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A monitor for remote reading of liquid volumes in pressurized tanks utilizes a hollow buoyant displacement probe extending downwardly from a load cell carried adjacent a top port in the tank. The buoyant probe is optionally formed in detachable segments so that it can be assembled on site at the time of installation. The load cell is suspended from a flange cover acting as a closure for the tank port so that the load cell is freely pivotable on perpendicular horizontal axes, insuring that it is always oriented horizontally. A temperature-reading string is positioned in the open hollow center of the probe and has three spaced temperature sensing units along its length.

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Force data from the load cell, giving the apparent weight of the probe immersed in the liquid tank contents, and temperature data, from which volumetric data may be calculated, are fed to an external battery-operated microprocessor which periodically radios its data to a central computer which may be polled by phone lines from a remote monitoring station.

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